MDARC CARRIER
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November Meeting

Friday, November 18
7:30 pm

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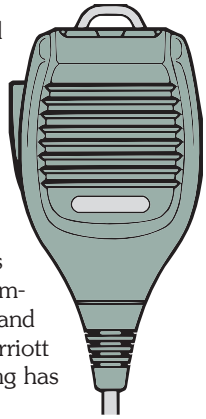
Tech Night

Our Savior's Lutheran Church
1035 Carol Lane
Lafayette, CA

Tech Night

By Trevor Hall, WA6JAU

This month's meeting is called Tech Night. There will be radio technicians with test equipment to check out your radio, and answer any questions you may have. We will also try to have break out sessions on subjects such as antenna tuning, echolink operation, and more. Our prize this month will be a dual band mobile radio. Bring the whole family, it should be a fun filled event.



Also this month is the election of officers. We have a full slate and need your choice for next years officers. Please attend and give us your input.

This month we had a great talk from Amsat by Emily Clark. The subject was satellite tracking, and Emily had some great graphics that was shown at Dayton. It was a very interesting presentation and no one left early. Thank you Emily, we are looking forward to future presentations.

We have received many comments on PACIFICON. The comments have been very constructive and we are considering every one for improvements next year. Most of the comments have been very positive and we appreciate that. We will again be located at the San Ramon Marriott hotel next year on October 13, 14 and 15. Please try to attend, planning has already started for a great event.

Next month is the annual holiday party on December 16th. Santa plans to attend and this is one night donated to socializing. Bring the entire family.

Inside

ARRL's Role In Rescue Offers Lessons For Future

By Mark David

Investigations into the communications breakdowns in our national emergency response systems continue. Yet I'm struck by the contrast between the hue and cry for upgraded infrastructure solutions and the much quieter revelation that old-school ham radio provided the only trustworthy communication during Hurricane Katrina.

New Orleans emergency departments' radios were wiped out when broadcast towers lost backup power generators. Police and fire departments only had citizen-band radios, offering inadequate bandwidth. Emergency responders lacked coordinated frequencies.

The National Guard cited antiquated communications technology-as a contributor to its delayed response. Lt. Gen. Steven Blum told USA Today that there was a shortage of high-tech radios and satellite communications gear. "We were underequipped," Blum told USA Today. "We don't need tanks and attack helicopters... but we must have state-of-the-art radios and communications."

The Guard has historically gotten "handmedown" equipment from active-duty military. It now uses "Vietnam-era radios while it needs 37,000 newer radios," according to Guard budget briefings.

Meanwhile, ham radio operators proved that older technology can be the most reliable technology. Our EDA Editor (and ham) David Maliniak wrote an online column on the subject, pointing out that sometimes "old works when new doesn't." (Read it and add your comments at ED Online 11136.) During and after Katrina, hams running on generators (sometimes with makeshift antennas) worked throughout the hurricane zone to put emergency stations on the air. They guided rescuers to stranded victims and updated weather services via the Hurricane Watch Net.

Amateur radio was the primary means of contact with the outside world for many shelters. It's estimated that some 1000 amateur radio volunteers helped serve the

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Mt. Diablo Amateur Radio Club W6CX

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The *Carrier* is a monthly publication of the Mount Diablo Amateur Radio Club (MDARC). It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to MDARC members, and space is available.

All material must be submitted to the editor by the first day of the month of publication. Material is accepted on a first-in, first-out basis. Articles and other material may be submitted via Internet email to carrier@gardnerclan.net or delivered to the editor at the address listed in the club roster. Material will be accepted in plain ASCII or rich text format (RTF). Material may also be submitted as hardcopy.

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General Meeting Minutes

October 21, 2005

President Trevor Hall, WA6JAU, calledthe meeting to order at 7:35 p.m. There were about 30 members and guests present.

The minutes of the previous meeting were not available for approval.

Treasurer Dick Schulze, AA6DL, reported that the treasury contained a total of $39,839.96 in all accounts (money market, certificate of deposit, and checking account). Dick advised the members that the Club had received less dues monies than budgeted, as well as less money from other sources, such as the picnic, than budgeted. Thus, the Club was about $3300 over budget due to a combination of under receipts and over expenses (previously approved by the Club).

Trevor reported that nominations were open for Club officer positions. After review of the candidates so far, no new nominations from the floor were received.

Keith Lattin, N6PMF, noted that the Club 2m repeater was currently operating on only 400mw. He will check this as well as the other repeaters this weekend.

Trevor announced:

- The December dinner party was coming up; details will be in the next *Carrier*.
- The November meeting will feature a tech night, with provisions for checking members' equipment, and perhaps some demonstrations. Also, at that meeting, the prizes will be mobile rigs.

Trevor adjourned the meeting at 7:55 p.m., for a break before the speaker, Emily Clarke, W0EEC, of San Mateo, a Board Member of Amsat, whose interesting presentation was on the Amsat system.

Respectfully submitted, Paul Dickey, N6JOX, Secretary

Board Meeting Minutes

November 7, 2005

President Trevor Hall, WA6JAU, called the meeting to order at 7:00 p.m.

Board Members present: Pres. Trevor Hall, Secretary Paul Dickey, N6JOX, Treasurer Dick Schulze, AA6DL, Directors Dick Brown, KT6X, Jay Caldis, KT6Y, and Terry Matzkin, KE6WRE, Past President. Other club members and guests: Chief Technician Keith Lattin, N6PMF, Trevor Raty, KG6MDW, Candidates Don Anthony, N6SIA (until 8:10), Dave Gordon, N6SWE, and Marty Heyman, W6MDH, as well as Member Mike Hole, KG6DER.

The minutes of the Oct. 3 meeting were APPROVED as printed in the *Carrier*.

Treasurer Dick Schulze REPORTED a balance of $37,409.95, total in both accounts, without including accrued interest not reported. He was presented with a donation of $255 from Russ Gobel of Northwest Embroidery as a result of PACIFICON hat sales.

Dick prepared a draft 2006 budget for preliminary discussion by the Board. After discussion, the Board RECOMMENDED a couple of small revisions, with the understanding the budget would be discussed in more depth at the next meeting.

Old Business:

- The Board DECIDED to mail individual ballots for the officer election to each member. Pres. Trevor will look into mailing postcard ballots, and if feasible, will use those.

New Business:

- Dick, KT6X, asked the Board to consider using PACIFICON as the October general meeting, or skipping the Oct. meeting. The consensus of the Board was to eliminate a separate meeting, unless that could be accomplished at PACIFICON.
- The Board DECIDED to ask Dick to put VE testing on the calendar, and to ask the webmaster to post VE dates/times on the web site, in order to prevent miscues in availability.

- Favorable feedback has been received from the use of e-mail announcements of general meetings. The Board DECIDED the reminder announcements should be continued.
- Terry advised the Board that he would like to be relieved of the magnetic sign sales duty.

President Trevor Hall adjourned the meeting at 8:45 p.m.
Respectfully submitted, Paul Dickey, N6JOX, Secretary

ARRL's Role In Rescue

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hurricane-ravaged communities and shelters, even providing communications for the Red Cross.

Still, the real lesson of the ham radio successes isn't that old sometimes trumps new. Upgraded, reliable hardware is vital for adequate emergency response. Amateur radio has continued to upgrade too. Hams use satellites, digital systems, cross-band repeaters, and more. As the American Radio Relay League (ARRL) puts it, the Morse code key may still be on the desk, but generally it's next to a modern system operable under extreme emergency conditions.

Distributed Networks

Katrina taught two key lessons. First, the Amateur Radio Emergency Service (ARES) organization proved effective because hams don't depend on a centralized infrastructure. When cell towers, phone switching centers, or other central communicationsnetworks are down, hams aren't. Many operators have their own generators and are ready to fire them up to get on the air when there's no power. National disaster response plans must assume that the centralized communications infrastructure likely will be crippled, so the emergency system must include a distributed or "mesh" networking scheme.

Second, ARRL succeeded because operators subscribe to a mission that comes with their licenses—to be ready to provide emergency communications whenever and wherever they're needed. ARES has a well-conceived action plan coordinated through the Radio Amateur Civil Emergency Service (RACES). ARES is part of the ARRL, and RACES is coordinated through the Federal Emergency Management Agency (FEMA). But like the broacast system, the emergency plan is decentralized. Radio operators can work independently to serve their community as circumstances require.

A decentralized emergency plan requires deputized people who truly understand and care about their responsibilities. The best emergency response relies on distributed manpower, with first responders empowered to make decisions at the scene of the crisis.

It doesn't take a federal investigation to realize that the government's emergency-response debacle was caused by centralizing the decision-making with politically appointed bureaucrats who didn't have a personal mission or a true sense of ownership in ensuring preparedness. The fiasco with now-deposed FEMA leader Michael Brown exemplifies the folly of appointments based on cronyism, rather than the recruitment of people who have a passion, understanding, and commitment for the responsibilities they shoulder.

In this issue's cover story, Ron Schneiderman looks at government programs and the new technologies tackling our homeland security problems. But will the right people get those technologies? Too often, homeland security appointments and dollars are doled out according to political favoritism. As we saw in the recent emergency response, technologies are only effective when managed by people—like the hams—who take their responsibilities to heart.

Hats off to all of you who care about the quality of the security and emergency communications technologies you're engineering. Let's hope they end up controlled by people who care just as much.

[*From the October 13th issue of* Electronic Design. *Used by permission*.]

Amateur Radio Station Installed at Miramonte High School

By Gene Gottfried, KQ6OL

A new Amateur Radio station was dedicated at Miramonte High School in Orinda on November 2nd, the fruits of a joint effort by the Orinda Rotary Club, a group of Amateur Radio enthusiasts and school officials.

The new station has been installed in the school's physics laboratory, where it can provide an opportunity not only for students to practice a great hobby, but also to demonstrate the practical application of some of the underlying principles being taught in physics courses. Moreover, Miramonte High School has been identified as a designated emergency shelter. In the event of a disaster, the station will be able to provide emergency communications when the normal communication channels become overloaded or disrupted.

Last spring, the Rotary Club of Orinda agreed to finance the purchase of equipment at the urging of then-president Gene Gottfried, KQ6OL, and other ham Rotarians, including Jack Reilly, AA6VN, Horst Rademacher, KF6BIM, and Lynn Cannady, KG6RUG. Physics teacher Dan Shortenhaus then took the Technician license examination and became, KG6ZLH. We purchased a Kenwood TM-G707a dual-band transceiver, an Astron 20 amp power supply, and a Diamond X50 dual-band vertical antenna. Following the summer recess, school district electrician Bill Knops installed the roof antenna and cable. With assistance from Bob Williams, N6UTX, and Diana Wilde, N6WWT, we soon finished the installation.

An earlier Amateur Radio club existed at Miramonte High School from 1989 until 2002 under the guidance of Diana Wilde (then Diana Neuman), N6WWT. It began as a Girl Scout Gold Award project and then became an Explorer club with both girls and boys as members. A room at the school was provided for the club. In 2002 the building housing the station was torn down to make room for a new theatre. The radio equipment and furniture disappeared and the club disbanded.

With the arrival of the new station, plans for a new radio club are already well under way. We look forward to a new generation of enthusiastic ham radio operators and MDARC members.

RACES Training Schedule November-December 2005

Date	Location	Subject
November 19	Oakley - Driftwood Yacht Club	Digital Modes
December	No Training	No Training

Be sure to verify the time and place of training on the countywide RACES net on the Thursday evening prior to the event. The countywide net airs at 7:20 PM on 147.735 Central County, 145.410 South County and 145.490 West County.

Technology Corner

By Trevor Hall, WA6JAU

The two meter repeater is running at five watts due to a failure of the new power amplifier. It will be shipped back to the factory this week for warranty repair. Failure is due to weak manufacturing practices.

All other repeaters are running great, the new ATV controller has been mounted in its cabinet and will be wired this month. Installation should be before the end of the year and then watch for the new added features such as on command on screen signal strength meter and color bar generator. If you want to monitor ATV, put an antenna on an old television and tune it to cable channel 58.

K7RA Solar Update

SEATTLE, WA, Nov 4, 2005—Conditions have recovered from zero sunspots, which lasted for five days. Average sunspot numbers rose nearly 10 points to 17.6 this week. Average daily solar flux rose just 1.2 points to 75.4.

October just ended, so let's look at monthly averages for sunspot numbers and solar flux to see if the trend is still down. Last month we looked at quarterly averages, but with monthly averages this time we'll see more volatility.

The average daily sunspot numbers for the months September 2004 through October 2005 were 50, 77.9, 70.5, 34.7, 52, 45.4, 41, 41.5, 65.4, 59.8, 68.7, 65.6, 39.2 and 13. Average daily solar flux for the same months was 103, 106, 113.7, 95, 102.3, 97.2, 89.9, 85.9, 99.5, 93.7, 96.5, 92.4, 91.9 and 76.6.

You can see that the numbers declined every month for the past four months, especially during October--which was like dropping off a cliff.

There has been some geomagnetic disturbance over the past couple of days, but conditions should settle down for the ARRL November Sweepstakes (CW) this weekend. Predicted planetary A index for Friday through Monday, November 4-7 is 20, 20, 12 and 8. Sunspot numbers and solar flux should rise slightly, reaching a peak around November 6-8.

If the planetary A index is 20 or higher this weekend it may cause some difficulty reaching those Alaska or Northern Territories multipliers in Sweepstakes, but don't count on any major flare activity.

For more information concerning propagation and an explanation of the numbers used in this bulletin see the ARRL Technical Information Service Propagation page. An archive of past bulletins is on the ARRL Web site.

Sunspot numbers for October 27 through November 2 were 0, 0, 11, 14, 29, 33 and 36, with a mean of 17.6. The 10.7 cm flux was 71.6, 73.1, 74.1, 75.6, 77.8, 77.3, and 78, with a mean of 75.4. Estimated planetary A indices were 6, 5, 2, 5, 13, 8 and 6, with a mean of 6.4. Estimated mid-latitude A indices were 5, 4, 1, 3, 6, 7 and 5, with a mean of 4.4.

NETS

W6CX ATV Net

General ATV Net — Thursday 8:00pm
Net Control: KG6MDW

Contra Costa County ARES/RACES Nets

Thursday, 7:00pm

Central County	145.680 Simplex Jim Brunk, N6BHX
East County	146.535 Simplex Drew Hanson, KD6GLY
South County	146.355/+ (100 PL) Ed Ritchie, K6SFD
West County	145.110/- Steve Adams, KF6WNH

CALENDAR OF EVENTS

November 7	7:00 pm	MDARC Board Meeting	Carl's Jr. 2280 Oakgrove, Walnut Creek
November 18	7:30 pm	MDARC General Meeting	Our Savior's Lutheran Church
November 30		December *Carrier* Deadline	
December 5	7:00 pm	MDARC Board Meeting	Carl's Jr. 2280 Oakgrove, Walnut Creek
Thursday Evenings	7:30 pm	MDARC Club Net	147.06 & 441.325 MHz

The Carrier
Newsletter of the Mt. Diablo Amateur Radio Club
P.O. Box 23222
Pleasant Hill, CA 94523

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MDARC General Meeting: November 18th